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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Atsushi Nakamura

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EXAMINER

CHU, KIM KWOK

ART UNIT

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2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,320	Applicant(s) NAKAMURA ET AL.	
	Examiner Kim-Kwok CHU	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment filed on 9/5/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32,34-40,48,52-58 and 63-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32,34-40,48,52-58 and 63-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2627

Drawing Objection

1. Figure 13A-13F and 14A-14F, should be designated by a legend such as --Prior Art-- as disclosed in the specification, sections 0007, 0010, 0042 and 0043.

Claim Objections

2. Claims 32, 48 and 67 are objected to because of the following informalities. For consistency and clarity of claim language, it is suggested that:

Regarding Claim 32, line 2, the term "to form marks" should be changed to --to form marks and spaces--.

Regarding Claim 48, line 2, the term "to form marks" should be changed to --to form marks and spaces--.

Regarding Claim 67, line 2, the term "to form marks" should be changed to --to form marks and spaces--.

Appropriate correction is required.

Art Unit: 2627

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 32, 34-40, 63 and 64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 32, the limitations of "coding to be-recorded data", "shifting the position of the second pulse" and "directing said recording pulse" are vague and indefinite as the claim does not have any structure to support for these functional limitations.

The claims not specifically mentioned above are rejected because these claims are dependent on the rejected base claims.

Art Unit: 2627

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

6. Claims 32, 34-40, 48, 52-58 and 63-68 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tanaka (U.S. Patent 6,426,930).

Tanaka teaches an information recording method having all of the steps as recited in claims 32, 34-40, 63 and 64. For example, Tanaka teaches the following:

Regarding to Claim 32, the optical recording method for directing a recording pulse train to an optical disc medium D (Fig. 8) to form marks thereon and for recording information as information about the edge positions of the marks and the spaces between marks (Fig. 12), the recording pulse train having been created by modulating laser light into plural power levels Pw1, Pw2, Pw3 (Fig. 12; APC in Fig. 8 controls laser power), wherein the method comprises:
coding to-be-recorded data into coded data (RLL modulation; column 8, line 63) consisting of the combination of marks and

Art Unit: 2627

spaces (Fig. 12); shifting the position of the second pulse edge counted from the starting end portion of the recording pulse train for forming the marks to adjust the recording pulse train (Figs. 12 and 13; the second pulse edge is shifted); and directing the recording pulse train to the optical disc medium D to form the marks (Figs. 8, 12 and 13; record marks are form on the disc medium).

Regarding Claim 34, in the course of the step of adjusting the recording pulse train, shifting the position of the second pulse edge of the recording pulse train which is counted from the ending end portion (Figs. 12 and 13; one of the shifted pulses is the second pulse from the ending end portion of the series of pulses).

Regarding to Claim 35, in the course of the step of adjusting the recording pulse train, further shifting the position of the pulse edge at the ending end portion of the recording pulse train (Figs. 12 and 13; one of the shifted pulses is the last pulse from the ending end portion of the series of pulses).

Regarding to Claim 36, in the course of the step of adjusting the recording pulse train, further shifting the position of the pulse edge at the starting end portion of said recording pulse train (Figs. 12 and 13; one of the shifted

Art Unit: 2627

pulses is the first pulse from the starting end portion of the series pulses).

Regarding to Claim 37, the recording pulse train for recording the marks includes three or more pulse edges (Figs. 12 and 13).

Regarding to Claim 38, in the course of the step of adjusting the recording pulse train, further shifting the position of the third pulse edge of the recording pulse train which is counted from the ending end portion (Figs. 12 and 13; one of the shifted pulses is the third pulse from the ending end portion of the series pulses).

Regarding to Claim 39, in the course of the step of adjusting the recording pulse train, further shifting the position of the third pulse edge of the recording pulse train which is counted from the starting end portion (Figs. 12 and 13; one of the shifted pulses is the third pulse from the starting end portion of the series pulses).

Regarding to Claim 40, the recording pulse train is created by modulating the laser light with at least three power values which are a first power $Pw1$, a second power $Pw2$ and a third power $Pw3$ in order of intensity (Fig. 12).

Regarding to Claim 63, classifying the marks within the coded data on the basis of the mark length, wherein in the

Art Unit: 2627

course of the step of adjusting the recording pulse train, shifting the position of the second pulse edge, depending on the result of the classification, to adjust said recording pulse train (Fig. 11).

Regarding to Claim 64, in the course of the step of classifying said marks, further classifying the mark lengths of the marks into at least three types of mark lengths n , $n+1$ and $n+2$ (n : a positive integer) (Fig. 11; marks are classified based on nT where n is 2 in S12, n is 3 in S14 and n is 1 in S16).

7. Apparatus claims 48, 52-58, 65 and 66 are drawn to the apparatus corresponding to the method of using same as claimed in claims 32, 34-40, 63 and 64. Therefore apparatus claims 48, 52-58, 65 and 66 correspond to method claims 32, 34-40, 63 and 64, and are rejected for the same reasons of anticipation as used above.

8. Apparatus claims 67 and 68 are drawn to the apparatus corresponding to the method of using same as claimed in claims 38. Therefore apparatus claims 67 and 68 correspond to method claims 38, and are rejected for the same reasons of anticipation as used above. Claim 68 however also recites the following limitation which is also taught by the prior art of Tanaka:

Art Unit: 2627

Regarding to Claim 68, playbacking the data recorded on the recording region (Fig. 8, reproduced signal from LPF 7 is the playback signal).

Related Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shoji et al. (6,157,609) is pertinent because Shoji teaches pulse modifying means in a recording apparatus.

Miyagawa et al. (6,510,116) is pertinent because Miyagawa teaches pulse modifying means in a recording apparatus.

Art Unit: 2627

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/
Examiner AU2627
May 19, 2009
(571) 272-7585

/HOA T NGUYEN/

Supervisory Patent Examiner, Art Unit 2627